

Observational Study of Elderly Suicidal Deaths

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Abstract

Suicide is a self-planned and deliberate termination of one's own life. Painful experiences suffered during their life lead to varying degrees of depersonalization and alienation. In the course of defending themselves from onslaught of negative stimuli, elderly people establish a desire for hastened death. An Observational study of suicides among elderly age group ≥ 60 years was conducted in the Department of Forensic Medicine and Toxicology, Osmania Medical College and General Hospital, Hyderabad during the period of 2016 to 2020. Police inquests, hospital records, toxicological reports and suicide letters were collected and studied. The total elderly suicidal deaths during the period of 5 years were 257, more common among 60-64 years aged people. Educated, middle class, joint family and different categories of professional background with physical ailments were common factors in the study. The methods used for suicide ranged from poisoning, hanging, burns to fall from height. The results were analysed and compared with previous research studies and this study matched with results of several other studies. This is possibly due to beginning of dependency and stressful life following their retirements. Suicide is the 3rd leading unnatural cause of death among elderly which is not an impulsive act. Intervention in the aged suicide will be a complex task and should involve changes at different levels of the current aged care system.

Key words: Suicide, Elderly deaths, cause of death, socio-economic status, physical illness, mental illness, dependency, agricultural works, locality, gastro-intestinal diseases and physical ailments

Introduction

The term "suicide"¹ comes from two words- sui (of oneself) and cide (killing of)- and is used to denote self-planned and deliberate termination of one's own life. The phenomenon of suicide as old as mankind, but still remains an unsolved giant puzzle.

The suicide was 3rd leading cause of unnatural death among elderly age group. An Observational study of suicides among elderly age group was conducted in the Department of Forensic Medicine and Toxicology, Osmania Medical College and General Hospital, Hyderabad during the period of 2016 to 2020. The study was started with objectives to study the age and

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sex distribution, suicidal trends, association between illness (Physical and Mental) and suicide; and to suggest strategies to control the suicides among elderly age Group. The details of circumstances leading to suicidal death were collected from the Police inquest reports, hospital records and post-mortem examination reports. People acquire a sense of self in an interpersonal context. Unfortunately, it is this same social milieu in which this delicate sense of self is fractured. Painful experiences suffered in

the developmental years lead to varying degrees of depersonalization and alienation. In the course of defending themselves from onslaught of negative stimuli, elder people establish a fundamental ambivalence toward themselves that eventuates in an essential split in the psyche. Both sides of this diversion of mind- the self and the anti-self are the dynamic systems that have their own integrity and boundaries.

Table No. 1 - Distribution of study population according to age.

S. No.	Age range	Number	Percentage
1	60-64 years	98	38.13%
2	65-69 Years	69	26.85%
3	70-79 Years	59	22.96%
4	80-89 Years	31	12.06%
5	90+ Years	2	0.8%
Total		257	100%

Table No. 2 - Distribution of study population according to occupation.

S. No.	Occupation	Number	Percentage
1	Advocate	1	0.3%
2	Agriculture & related works	72	28.01%
3	Business	13	5.05%
4	House wife	69	26.84%
5	Labourers	43	16.73%
6	Driver	6	2.33%
7	Private employee	12	4.66%
8	Watchmen	5	1.94%
9	Retired employee from Govt.	26	10.11%
10	Others	10	3.89%
Total		257	100%

Table No. 3 - Distribution of study population according to type of physical illness.

S. No.	Physical Illness	Number of cases	Percentage
1	Diabetes, Hypertension and its related disorders	11	9.01%
2	GIT Illness	50	40.98%
3	COVID-19 and its related diseases	4	2.45%
4	Chronic Lung Diseas	9	7.37%
5	Cancer	4	3.27%
6	Joint and Spine disease	7	5.73%
7	Kidney disease	11	9.01%

8	Paralysis	8	6.55%
9	Unidentified physical illness	7	5.73%
10	Thyroid disorders	2	1.63%
11	Others	6	4.91%
12	Heart disease	3	2.45%
Total		122	100%

Table No. 4 - Distribution of study population according to method of suicide.

S. No.	Suicide method	Number	Percentage
1	Poisoning	117	45.53%
2	Drowning	6	2.33%
3	Fall from height	12	4.67%
4	Hanging	72	28.02%
5	Railway Deaths	8	3.11%
6	Burns	42	16.34%
Total		257	100%

Materials and Methods

All deceased of elderly age group of ≥ 60 years based on post mortem examinations conducted at mortuary, Osmania general hospital during the period of 2016-2022. Police inquests, hospital records, toxicological reports and suicide letters were studied.

Findings:

The total suicidal deaths of elderly age group people during the period of 5 years (2016-2022) were 257 i.e. 10.21% of total suicidal postmortem examinations performed at mortuary, Osmania general hospital. Out of these, 36 were in first year (2016), 45 were in second year (2017), 46 were in third year (2018), 63 were in fourth year (2019) and 67 were in fifth year (2020). Elderly suicides were more common among 60-64 years aged people i.e. 38.1%, followed by 65-69 years aged i.e. 26.8%, 70-79 years aged i.e. 22.5%, 80-89 years aged i.e. 12.06% and the least was noted in 90+ years aged people i.e. 0.78%. Among these, 165 were males and 92 were female. It is found that more than half of the deceased i.e. 50.5% were from rural areas and 49.5% were from urban area. Among the study population, 57% were uneducated and 43% educated. It was observed that, 12 people (4.66%) were belonged to the upper class, 157 people (61.08%) were belonged to the middle

class and 88 people (34.24 %) were belonged to the lower class groups. Different categories of people were involved in agriculture related works were 72, house wives were 69, labourers were 43, from retired govt. employees were 26, private employees were 12, business people were 13, lawyer was 1 and others were 21. It is observed that more were from joint family i.e. 59% than nuclear family i.e. 40% and least in alone people i.e. 1%. Health conditions of the deceased were studied and grouped into mental illness and physical illness, 70 were (27.23 %) had history of mental illness, 187 (72.76 %) were had no history of mental illness. While considering other health conditions like Diabetes, Hypertension and its Related Disorders were 11 (9.01 %), GIT Illness were 50 (40.98 %), Heart Disease were 3 (2.45 %), Chronic Lung Disease were 9 (7.37 %), Covid-19 And Its Related were 4 (2.45 %), Cancer were 4 (3.27 %), Paralysis were 8 (6.55 %), physical illness were 122 (47.47 %) and without any physical illness were 135 (52.52 %). Suicidal methods were used by our study population were Acid ingestion - 24 (9.33 %), Burns - 42 (16.34 %), Consumption of rat poison - 2 (0.77 %), Consumption of sanitizer - 1 (0.38 %), Drowning - 6 (2.33 %), Drug overdose - 4 (1.55 %), Hanging - 72 (28.01 %), OP poisoning - 85 (33.07 %), Paraquat poisoning - 1 (0.38 %), Suicidal fall from height - 12 (4.66 %), Suicide on railway track - 8 (3.11 %),

Discussion

The results and observations of the present study is analysed and compared with previous research studies. During the study period of 5 years (2016-2022) it was observed that 257 i.e. 10.21% of total suicidal postmortem examinations performed at mortuary Osmania general hospital. Out of these 257 cases, 36 are in first year (2016), 45 are in second year (2017), 46 are in third year (2018), 63 are in fourth year (2019) and 67 are in fifth year (2020). It is also corresponding with study of Department of Health and Human Services (CDC), in which suicide rates increases with age and are very high among those 65 years and older. It has been found that suicide among elderly was common in individuals aged 60-64 years (38.1%), followed by 65-69 years (26.8%), 70-79 years (22.5%), 80-89 years (12.06%) and least in 90+ years (0.78%). The similar findings were observed by Dr. Vikram Palimar¹, who found suicide among aged 61-65 years, was 48.4%. This is possibly due to beginning of dependency and stressful life following their retirements. In contrast to this in collaborative study by SAMHSA, CDC¹⁴, NIH, and HRSA, HIS, suicide rate increased with increasing age.

It was observed in the present study that the elderly males (64.2%) were more prone for suicide than their counterparts (35.7%) with a male female ratio 1.7:1. The similar high rates of suicide among males were reported by Ronald W Maris², Abraham VJ³, Bennet⁴, collaborative study and very high rate was reported by Dr. Vikram Palimar¹. This high rate among males may be due to declining health, depleting wealth and depending tendency on alcohol and drugs.

It has been observed that more than half of the deceased (50.5%) were from rural area, similar to the study by Hude Quan⁵ who reported highest rate of suicide in rural population (46.7%). Many of the rural patients reach the urban for area for better treatment and that is the main reason for observing more rural deaths than urban.

It shows that 57% of the individuals were not educated in the present study and the similar findings of high level of low educational status (75%) among elderly suicide reported by Rubernowitz⁶.

It shows that more than half of the study group belonged to middle (61%) and quarter of the population belonged to lower class (34%) of the socioeconomic groups. Only 4% belonged to upper class.

It is observed that more than quarter (28%) of our study population belonging to agriculture and agriculture related works, while another quarter (26%) were household works and were dependent, labourers constitute about (16%), about 10% were retired from government services and staying at home and remaining were business and other works (5%).

It has been observed that 59% of the individual were from joint family, 40% were from nuclear families and fraction was staying alone. In their study Ronald W Maris², Allan L Berman², Quan⁴, Cattell HR⁷, Kaplan⁸ and Sodoocks⁸ also found the similar observations of suicide among living alone. The reason for high rate of suicide in joint family in this study could be due to social and cultural differences in this part of world, where majority of the families are joint families, in contrast to living alone and nuclear families which are common in western countries.

It has been observed in the present study that the elderly suicide has got multifactorial causation. Among them chronic illness (47%), psychiatric disorders (27%), financial problems (30%), family conflicts (26%), addiction to the substance abuse (9%) were the common factors. These findings are in contrast with Howard Cattell⁷, Bennet⁴, Hude Quan⁵ in which psychiatric illness and mental illness were common. Family conflicts were the commonest factor as 59.53% of the individuals in the present study were from joint family. Chronic illness and physical pain were common due to aging and low socioeconomic status, because of these factors major portion of the elderly had depressive psychiatric disorders secondary to their illness. About 9% of study population was alcohol (Toddy in rural areas) dependent / addicts. In this study one was committed suicide because of not getting toddy during lockdown period. Similar finding were observed by Howard C⁹, O Connell H, Chin AV, Cunningham C¹⁰ et, al. Indicating strong correlation between suicide and substance abuse. Gastrointestinal problems

including chronic pain abdomen (40%) were most common chronic illness faced by study population. Others include diabetes mellitus (9%), respiratory problems (7%), osteoarthritis and spine disorders (5.7%), cancers (3.2%), kidney and urinary problems (9%) and liver problems (0.8%). These findings were contrary to findings observed by Howard Cattell⁶, and H R Cattell⁷. But high rate of cancer incidence among elderly who committed suicide was found by Haakon H Eilersten¹¹. This indicates gastro intestinal problems were neglected by the people than the cardiovascular and diabetes. In addition they are contributing to increase in suicide rates among elderly.

The present study shows that OP poisoning was the commonest method of suicide, followed by hanging and the burns was third most common method. In many studies like Howard C Bennett AT, Collins KA⁴, DeMartino RE¹² et, al. gun shot injuries were common, but in present study not a single case of fire arm injuries was reported. Fall from height was the most predominant in the study by Robert C Abrams¹³, but in present study shows that only 5.66% of individuals committed suicide by fall from height. Suicide by over dose of drugs was common in study by Rubenowitz⁶ but in present study it is only 1.55% only. Poisoning as common suicidal method used by victims in this study could be due to lack of rules and regulations regarding use of pesticides and easy accessibility.

Conclusion

Suicide is the third leading unnatural cause of death among elderly. Suicide rate among elderly males predominated over their counterparts with male: female ratio of 1.7:1. More than half of the victims were rural dwellers. About 57% of the study groups were uneducated. 52% of the individuals belonged to not working/households. Bulk of them belonged to middle and upper lower class. More than 52% of study populations were dependents. About 59% of the elderly suicide victims hailed from joint family and another 25% were having loneliness/isolated history. Poisoning was the commonest method of committing suicide (43%), followed by hanging (28%), burns (16%), drowning (2.3%) and

others (2%). Gastro intestinal problems diseases/ disorders including chronic pain abdomen (40%) were the most common chronic illness faced by study population. This indicates Gastro intestinal problems were neglected by the people than the cardiovascular and diabetes. In addition they are contributing to increase in suicide rates among elderly. It has been observed in the present study that the elderly suicide has got multifactorial causation including, Physical illness (47%), Mental illness (27%), both physical and mental illness by (5.44%), Family and financial problems (19.4%), and addicted to alcohol and financial problems (8.94%), others are miscellaneous. Suicide among older people rarely is an impulsive act. Intervention in the aged suicide will be a complex task and should involve changes at different levels of the current aged care system.

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